APPENDIX B

```
AREA .. SUM(I,A(I)) =E= 0;
VELOCITY(VINDX) .. VEL(VINDX) =E= VSCALE * SUM(I$(ORD(I)
     LE ORD(VINDX)), A(I));
POSITION .. SUM(I,VEL(I)) =E= FINALPOS * SCALEFACT;
VLIMITP(I) .. SUM(VINDX$(ORD(VINDX) LE ORD(I)),A(I-
     (ORD(VINDX)+1))*(VOLTS(VINDX)+KBACK*VSCALE))
     =L= VOLTLIM;
VLIMITN(I) .. SUM(VINDX$(ORD(VINDX) LE ORD(I)), A(I-
     (ORD(VINDX)+1))*(VOLTS(VINDX)+KBACK*VSCALE))
     =G= -VOLTLIM

% A(I) are the current commands at time T(I) spaced equally at time DT.
% VOLTS(VINDX) is a table of voltages representing the unit pulse response to
% a unit output in current command.  VOLTLIM is the voltage limit at saturation.
```